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STRUCTURE FILE UPDATES: 26 DEC 2007 HIGHEST RN 959588-76-2
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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

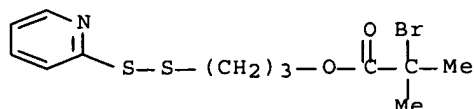
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=> D

L45 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
RN 817208-79-0 REGISTRY
ED Entered STN: 20 Jan 2005
CN Propanoic acid, 2-bromo-2-methyl-, 3-(2-pyridinyldithio)propyl ester (CA INDEX NAME)
MF C12 H16 Br N O2 S2
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> FILE HCAPL

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KATHLEEN FULLER

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S L45

L46 4 L45

=> D L46 BIB ABS IND HITSTR 1-4

L46 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1192472 HCAPLUS Full-text

DN 144:83457

TI In Situ Preparation of Protein-"Smart" Polymer Conjugates with Retention of Bioactivity

AU Heredia, Karina L.; Bontempo, Debora; Ly, Tiffany; Byers, Joshua T.; Halstenberg, Sven; Maynard, Heather D.

CS Department of Chemistry and Biochemistry and California Nanosystems Institute, University of California Los Angeles, Los Angeles, CA, 90095-1569, USA

SO Journal of the American Chemical Society (2005), 127(48), 16955-16960
CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

OS CASREACT 144:83457

AB Protein-polymer conjugates are widely used in biotechnol. and medicine, and new methods to prepare the bioconjugates would be advantageous for these applications. In this report, the authors demonstrate that bioactive "smart" polymer conjugates can be synthesized by polymerizing from defined initiation sites on proteins, thus preparing the polymer conjugates in situ. In particular, free cysteines, Cys-34 of bovine serum albumin (BSA) and Cys-131 of T4 lysozyme V131C, were modified with initiators for atom transfer radical polymerization (ATRP) either through a reversible disulfide linkage or irreversible bond by reaction with pyridyl disulfide- and maleimide-functionalized initiators, resp. Initiator conjugation was verified by electrospray-ionization mass spectroscopy (ESI-MS), and the location of the modification was confirmed by μ LC-MSMS (tandem mass spectrometry) anal. of the trypsin-digested protein macroinitiators. Polymerization of N-isopropylacrylamide (NIPAAm) from the protein macroinitiators resulted in thermosensitive BSA-polyNIPAAm and lysozyme-polyNIPAAm in greater than 65% yield. The resultant conjugates were characterized by gel electrophoresis and size exclusion chromatog. (SEC) and easily purified by preparative SEC. The identity of polymer isolated from the BSA conjugate was confirmed by ^1H NMR, and the polydispersity index was determined by gel permeation chromatog. (GPC) to be as low as 1.34. Lytic activities of the lysozyme conjugates were